

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. **(Currently amended)** ~~Use of core/shell particles whose shell forms a matrix and whose core is essentially solid and has an essentially monodisperse size distribution as template~~ A process for the production of inverse opal structures comprising forming core/shell particles whose shell forms a matrix and whose core is essentially solid and which have an essentially monodisperse size distribution,
forming an inverse opal structure on said core/shell particles by covering the shell with a precursor material and then removing the core and shell of said particle.
2. **(Currently amended)** Use A process according to Claim 1, characterised in that wherein the shell in the core/shell particles is bonded to the core via an interlayer.
3. **(Currently amended)** Use A process according to at least one of the preceding claims Claim 1, characterised in that wherein the core/shell weight ratio in the core/shell particles is in the range from 20:1 to 1.4:1, preferably in the range from 6:1 to 2:1 and particularly preferably in the range from 5:1 to 3.5:1.
4. **(Currently amended)** Use A process according to at least one of the preceding claims Claim 1, characterised in that wherein the shell in the core/shell particles consists of essentially of uncrosslinked organic polymers, ~~which are preferably grafted onto the core via an at least partially crosslinked interlayer.~~
5. **(Currently amended)** Use A process according to at least one of the preceding claims Claim 1, characterised in that wherein the core in the core/shell particles consists of an organic polymer, ~~which is preferably crosslinked.~~
6. **(Currently amended)** Use A process according to at least one of Claims 1 to 4

Claim 17, ~~characterised in that~~ wherein the core in the core/shell particles consists of an inorganic material, and the core:shell weight ratio is ~~preferably~~ in the range from 5:1 to 1:10, ~~in particular in the range from 2:1 to 1:5 and particularly preferably in the region below 1:1.~~

7. **(Currently amended)** ~~Process A~~ process for the production of inverse opal structures, ~~characterised in that comprising,~~
 - a) drying a dispersion of core/shell particles whose shell forms a matrix and whose core is essentially solid ~~is dried,~~
 - b) optionally adding one or more precursors of suitable wall materials ~~are added,~~ and
 - c) ~~the cores are~~ subsequently removing the core ~~removed.~~
8. **(Currently amended)** ~~Process A~~ process for the production of inverse opal structures according to Claim 7, ~~characterised in that~~ wherein in after the core shell particles are dried in step a) a step a2), the application of a mechanical force is applied to a mass of the core/shell particles pre-dried in step a1) takes place.
9. **(Currently amended)** ~~Process A~~ process for the production of inverse opal structures according to Claim 8, ~~characterised in that~~ wherein the action of a mechanical force takes place through uniaxial pressing or during an injection-moulding operation or during a transfer moulding operation or during (co)extrusion or during a calendering operation or during a blowing operation.
10. **(Currently amended)** ~~Process A~~ process for the production of inverse opal structures according to Claim 7, ~~characterised in that~~ wherein the precursor in step b) is a solution of an ester of an inorganic ortho-acid with a lower alcohol.
11. **(Currently amended)** ~~Process A~~ process for the production of inverse opal structures according to Claim 7, ~~characterised in that~~ wherein step b) is carried out under

reduced pressure, ~~preferably in a static vacuum of $p < 1$ mbar.~~

12. **(Currently amended)** ~~Process~~ A process for the production of inverse opal structures according to Claim 1 ~~7~~, ~~characterised in that~~ wherein step c) comprises calcination, ~~preferably at temperatures above 200°C, particularly preferably above 400°C.~~
13. **(Currently amended)** ~~Process~~ A process for the production of inverse opal structures according to Claim 7, ~~characterised in that~~ wherein step c) is an etching process; ~~preferably etching with HF.~~
14. **(Currently amended)** ~~Process~~ A process for the production of inverse opal structures according to Claim 7, ~~characterised in that the core/shell particles are removed~~ further comprising removing the shell in step c).
15. **(New)** A process for the production of inverse opal structures according to Claim 13, wherein the etching process comprises an HF etchant.
16. **(New)** A process according to Claim 6, wherein the core:shell weight ratio is in the region below 1:1.
17. **(New)** A process according to Claim 6, wherein the core:shell weight ratio is in the range from 2:1 to 1:5.
18. **(New)** A process according to claim 12, comprising calcination at temperatures above 400°C.
19. **(New)** A process according to Claim 11, wherein step b) is carried out in a static vacuum of $p < 1$ mbar.
20. **(New)** A process according to Claim 3, wherein the core:shell weight ratio in the

core/shell particles is in the range from 6:1 to 2:1.

21. **(New)** A method according to Claim 20, wherein the core:shell weight ratio in the core/shell particles is in the range from 5:1 to 3.5:1.
22. **(New)** A method according to Claim 5, wherein the organic polymer is crosslinked.
23. **(New)** A method according to claim 4, wherein said uncrosslinked organic polymer is grafted onto the core via at least partially crosslinked interlayer.